

CELLULAR RESPIRATION: MAKING GASOLINE FOR YOUR CELLS

INTRODUCTION: Complete the following questions using the website
http://www.phschool.com/science/biology_place/biocoach/cellresp/intro.html

Once you have navigated to the website, go through the screens by clicking the “next” button. Please note that you may have to view some of the provided animations to answer the questions.

1. Define Cellular respiration. **Cellular respiration is the process by which the chemical energy of "food" molecules is released and partially captured in the form of ATP.**
2. What is the most common “fuel” for respiration? **Glucose**
3. What three processes do we divide Cellular Respiration up into? Where does each process occur?
 1. **Glycolysis occurs in the cytosol.**
 2. **The Krebs cycle takes place in the matrix of the mitochondria.**
 3. **Oxidative phosphorylation via the electron transport chain is carried out on the inner mitochondrial membrane.**
4. What are the two steps that the cell goes through if oxygen is not available? **Glycolysis and Fermentation**
5. Reactants are the “ingredients” of a reaction, while products are what the reaction ends up making. Glycolysis is the breaking down of sugar (the roots *lysis* means to break and *glyco* is referring to sugar). What are the reactants of Glycolysis? **Glucose molecules**
What are the products? **ATP, NADH and Pyruvate**
6. What gas is given off during the Krebs Cycle? **Carbon Dioxide**
7. What makes up the Electron Transport Chain? **A series of molecules, mostly proteins, embedded in the mitochondria's membranes**
8. What is fermentation? When does the cell use this process? **Fermentation occurs when there is no oxygen present. It finishes breaking down glucose for the cell.**
9. How many molecules of ATP can cellular respiration make? **36-38** How many molecules does the cell make if oxygen is not present? **2**
10. Take the self quiz. Print off your final score and attach it to this sheet.